



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,911	05/21/2007	Markus Kley	WW057USU/WW1	5074
27623	7590	09/02/2010		
OHLANDT, GREELEY, RUGGIERO & PERLE, LLP ONE LANDMARK SQUARE, 10TH FLOOR STAMFORD, CT 06901			EXAMINER TRIEU, THAI BA	
			ART UNIT 3748	PAPER NUMBER
			MAIL DATE 09/02/2010	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,911	Applicant(s) KLEY ET AL.	
	Examiner THAI BA TRIEU	Art Unit 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-28 is/are allowed.
- 6) ☒ Claim(s) 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :06/20/2006; 05/21/2007; & 03/29/2010.

DETAILED ACTION

The Preliminary Amendment filed on 05/21/2007 is acknowledged.

Claims 1-14 were cancelled; and

Claims 15-28 were newly added.

Oath/Declaration

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not identify the citizenship of each inventor properly. The citizenship of each inventor in this application should be -- **Germany** --, instead of "**German**" therein.

Inventorship

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

Art Unit: 3748

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore,

“... said multi-disk clutch being designed for mechanical and locking in place the primary impeller” (See Claim 16);

“an engageable or regulatable throttle site in an upstream flow direction of said hydrodynamic coupling, said engageable or regulatable throttle site throttling a flow...” (See Claim 19);

“first pre-given filling level”; “second pre-given filling level”; “third pre-given filling level” (See Claim 22); and

“throttling a flow of working medium...” (See Claim 27) must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

Art Unit: 3748

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

1. IN THE ABSTRACT:

Since the Abstract is too long, Applicants are required to a substitute Abstract to meet the requirement set forth below:

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to **a single paragraph on a separate sheet within the range of 50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

2. IN THE SPECIFICATION:

1. The disclosure is objected to because of the following informalities: the following headings in the specification are missing:

Background of the Invention;

Summary of the Invention;

Brief description of the Drawings; and

Detailed Description of the Preferred Embodiments

Applicant is requested to insert heading to separate the various parts application. Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Specifically,

In Claim 22, the recitations of ***“first pre-given filling level”***; ***“second pre-given filling level”***; ***“third pre-given filling level”*** must be incorporated with the Specification.

In Claim 23, the recitation of ***“said second pre-given filling level being lower than the first pre-given filling level”*** must be incorporated with the Specification.

In Claim 24, the recitation of “***said third pre-given filling level being the same as the second pre-given filling level***” must be incorporated with the Specification.

In Claim 25, the recitation of “***said third pre-given filling level being lower than the second pre-given filling level***” must be incorporated with the Specification.

Claim Objections

Claim 18 is objected to because of the following informalities:

In Claim 18, line 3, the recitation of “***said hydrodynamic cooupling***” should be replaced by -- **said hydrodynamic coupling** --.

Appropriate correction is required.

Claim Suggestions

Claim 22 is suggested to be revised as following for clarifying the claimed limitations and for correcting grammatical error.

-- 22. A process of controlling a drive train, comprising:

utilizing exhaust gas energy with a driven exhaust gas turbine to keep a hydrodynamic coupling filled with working medium to a first pre-given filling level or completely filled when neither a primary impeller ~~[[or]]~~ **nor** a secondary impeller of the hydrodynamic coupling are mechanically braked;

filling a working chamber of the hydrodynamic coupling to a second pre-given filling level when the primary impeller is mechanically locked in place; and
draining the working chamber to a third pre-given filling level or completely, at least prior to mechanically braking ~~[[and/or]]~~ and during mechanically braking of the primary impeller. --

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 15 and its dependent claims 16-21; and Claim 22 and its dependent claims 23-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically,

In Claim 15, the recitation of ***“can be filled with”*** in line 9, renders the claim indefinite, since it is not clear that, under which condition(s)/mode(s) of the drive train, the primary and secondary impellers ***can be filled*** with a working medium; and under which condition(s) or mode(s) of the drive train, the primary and secondary impellers **cannot be filled** with a working medium? Applicants are required to identify the condition(s)/mode(s) or to revise the claimed limitation.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 15 is rejected under 35 U.S.C. 102(b) as being anticipated by John Erich et al. (Pub. Number DE 3904399 A1).

John Erich discloses a drive train, comprising:

an internal combustion engine (20);

an exhaust gas turbine (2) arranged in an exhaust gas flow (via 24 to 22) of said internal combustion engine (20);

a crankshaft (18) being driven by said internal combustion engine (20);

a hydrodynamic coupling (8) having a primary impeller (10) and a secondary impeller (12), the primary and secondary impellers (10, 12) forming a working chamber that can be filled with a working medium for transmission of torque, said hydrodynamic coupling (8) optionally coupling said crankshaft (18) to said exhaust gas turbine (2) so that said crankshaft (18) is driven by said exhaust gas turbine (2), the primary impeller (10) being in driven connection with said exhaust gas turbine (2), the secondary impeller (12) being in driven connection with said crankshaft (18), the primary impeller (10) being optionally mechanically braked and locked in place against rotary movement so that said

Art Unit: 3748

hydrodynamic coupling functions as a hydrodynamic retarder (See Figure , Page 5, lines 20-27 of a fully Certified English Translation); and

a control (42) for draining the working chamber of said hydrodynamic coupling (8) to a pre-given level of filling during a switching to a retarder operation, said hydrodynamic coupling (8) functioning as the hydrodynamic retarder prior to and/or during braking of the primary impeller (10) (See Page 6 lines 23-27, and Page 7, lines 1-18 of a fully Certified English Translation).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over John Erich et al. (Pub. Number DE 3904399 A1), in view of Friedrich et al. (Pub. Number WO 02/070877 A1 or US Patent Number 6,886,337 B2).

John Erich discloses the invention as recited above, and further discloses (**Re. Cl. 19**) an engageable or regulatable throttle site (62) in an upstream flow direction of said hydrodynamic coupling (8), said engageable or regulatable throttle site (62) throttling a flow of working medium into the working chamber prior to braking and/or

Art Unit: 3748

during braking of the primary impeller (See Page 7, lines 19-27, and Page 8, lines 1-4 of a fully Certified English Translation).

However, John Erich fails to disclose **(Re. Cl. 16)** a multi-disk clutch and **(Re. Cl. 17)** said hydrodynamic coupling being arranged in a cooling circuit.

Friedrich teaches that it is conventional in the art of a drive unit with a turbocharged internal combustion engine, to utilize **(Re. Cl. 16)** a multi-disk clutch (4.5) being associated with the primary impeller (4.1), said multi-disk clutch (4.5) being designed for mechanical braking and locking in place the primary impeller (See Figure 1, Column 1, lines 36-40, Column 2, lines 26-67); and **(Re. Cl. 17)** wherein said hydrodynamic coupling (4.1, 4.2) is arranged in a cooling circuit of a vehicle, and wherein the working medium is a vehicle cooling medium (See Column 4, lines 4-9).

It would have been obvious to one having ordinary skill in the art at that time the invention was made, to have utilized **(Re. Cl. 16)** a multi-disk clutch and **(Re. Cl. 17)** said hydrodynamic coupling being arranged in a cooling circuit, as taught by Friedrich, to improve the efficiency of the John Erich device, since the use thereof would have provided a drive unit utilizing the residual energy contained in the exhaust gas in the traction mode and contributing to the braking in the braking mode.

Allowable Subject Matter

Claims 22-28 are allowed.

Claims 18 and 20-21 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Information Disclosure Statement

The information disclosure statements (PTO-1449) submitted on **20 June 2006 ; 21 May 2007, and 29 March 2010** have been acknowledged and placed in the file. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements have been considered by the examiner. Each initialized copy is attached hereto.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THAI BA TRIEU whose telephone number is (571)272-4867. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

Art Unit: 3748

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TTB
August 31, 2010

/Thai-Ba Trieu/
Primary Examiner
Art Unit 3748